THIRD CFSF WORKSHOP ON POROUS MEDIA FLOWS
May 8-10, 2012
Hilton Garden Inn
Laramie, Wyoming

**Tuesday, May 8**

12:00pm Working Lunch (Garden Ballroom, Hilton Garden Inn)

12:20pm – 12:30pm Opening Remarks (Garden Ballroom, Hilton Garden Inn)

12:30pm – 1:15pm Special Presentation: Hydro-geochemical modeling of CO2 sequestration including mineral dissolution effects
Speaker: Prof. Sidarta Araujo de Lima, Federal University of Rio Grande do Norte, Brazil

1:30pm – 2:30pm Session on Pore Scale Modeling

1:30pm – 2:00pm Direct pore-level modeling of flow and transport in naturally-occurring porous media
CFSF PI: M. Piri, Speaker: Dr. Saeed Ovaysi

2:00pm – 2:30pm Pore-scale modeling of three-phase flow in random mixed-wet porous media
CFSF PI: M. Piri, Speaker: Arsalan Zolfaghari Shahrak

2:30pm – 3:00pm Session on Experimental Science: Validation of a Novel Apparatus for Interfacial Tension and Contract Angle Measurements at HPHT conditions
CFSF PI: Lamia Goual; Speaker: Soheil Saraji

3:00pm – 3:30pm Coffee Break

3:30pm – 5:30pm Short Course: Introduction to computational reservoir geomechanics
Speaker: Prof. Marcio Murad, LNCC, Brazil

**Wednesday, May 9**

10:00am – 12:00pm Short Course: Up-scaling and flow in heterogeneous and fractured media
12:00pm Working Lunch

12:30pm – 1:15pm Special Presentation: A semi-discrete central scheme for scalar hyperbolic conservation laws with heterogeneous storage coefficient and its application to porous media flow
Speaker: Prof. Maicon R. Correa, UNICAMP, Brazil

1:30pm – 2:30pm Session on Reservoir Geomechanics

1:30pm – 2:00pm On the development of the UW-team simulator for compositional flows
CFSF PI: F. Pereira, Speaker: Dr. Marcos Mendes

2:00pm – 2:30pm Micro-scale coupled modeling of geomechanics and multiphase fluid flow and its applications
Speaker: Samin Raziperchikolaee

2:30 pm – 3:00 pm Session on Numerical Analysis: Conservative Flux from Galerkin FEM by Simple Post Processing
CFSF PI: V. Ginting; Speaker: Larry Bush

3:00pm – 3:30pm Coffee Break

3:30pm – 5:30pm Short Course: Introduction to computational reservoir geomechanics
Speaker: Prof. Marcio Murad, LNCC, Brazil

6:00 pm - 8:00 pm Workshop Dinner (Salon F, Hilton Garden Inn)

Thursday, May, 10

10:00am – 12:00pm Short Course: Up-scaling and flow in heterogeneous and fractured media
Speaker: Prof. Benoit Noetinger, IFP Energies nouvelles, France

12:00pm Working Lunch

12:30pm – 1:15pm Special Presentation: Quantification of uncertainty in permeability of reservoir models using the LABTRAN-GEO method
Speaker: Prof. Marcio Borges, LNCC, Brazil

1:30pm – 2:30pm Session on Flows in Fractured Formations

1:30pm – 2:00pm Homogenization of a model for CO2 sequestration in saline aquifers
Speaker: Dr. Celestin Zemtsop
2:00pm – 2:30pm  Overview of the UW-team compositional simulator with a two-phase flow fractured reservoir example
Speaker: John Spitler

2:30pm – 5:30pm  Session on Multiscale Methods and Uncertainty Quantification

2:30pm – 3:00pm  Uncertainty analysis of carbon sequestration in an inclined deep saline aquifer
CFSF PI: Ye Zhang; Speaker: Guang Yang

2:30pm – 3:00pm  Session on Multiscale Methods and Uncertainty Quantification

3:00pm – 3:30pm  Coffee Break

3:30pm – 4:00pm  A new direct method of parameter estimation for steady state flow in heterogeneous aquifers with unknown boundary condition
CFSF PI: Ye Zhang; Speaker: Juraj Irsa

3:30pm – 4:00pm  Session on Multiscale Methods and Uncertainty Quantification

4:00pm – 4:30pm  Design and implementation of a multiscale mixed method for two-phase flows
CFSF PI: F. Pereira; Speaker: Joyce Rigelo

4:30pm – 5:00pm  Multi-stage, multi-physics Markov chain Monte Carlo methods for prediction in subsurface flows
CFSF PI: V. Ginting; Speaker: Dr. Arunasalam Rahunanthan

4:30pm – 5:00pm  Session on Multiscale Methods and Uncertainty Quantification

5:00pm – 5:30pm  A multiscale filtering technique for characterization of fractured media
Speaker: Dr. Michael Presho

5:00pm – 5:30pm  Session on Multiscale Methods and Uncertainty Quantification

5:30 pm  Concluding remarks